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N. C. State College of Agriculture and Engineering
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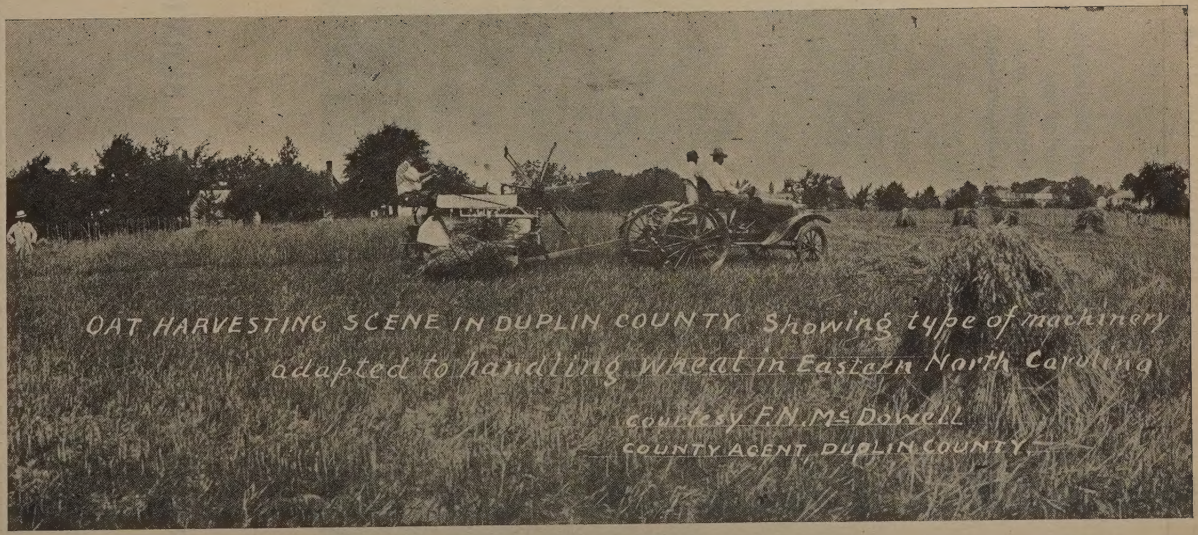
AGRICULTURAL EXTENSION SERVICE

B. W. KILGORE, Director

RALEIGH AND WEST RALEIGH, NORTH CAROLINA



OAT HARVESTING SCENE IN DUPLIN COUNTY Showing type of machinery adapted to handling wheat in Eastern North Carolina

courtesy F.N. McDowell
COUNTY AGENT, DUPLIN COUNTY

THE GROWING OF WHEAT IN EASTERN NORTH CAROLINA

By R. W. Freeman, *District Agent.*

INTRODUCTION

heat is not now, never has been, and probably never will be, a com-
ial crop in Eastern North Carolina. Yet there is hardly a county
e Coastal Plain section where the crop is not grown successfully,
ast years in a very limited way. During the past season the acreage
considerably increased. Many farmers have sufficient wheat for
e use.

. 2. Courtesy M. C. Vaughan, County Agent, Craven County
ECTION OF WHEAT FIELD ON THE FARM OF GRAHAM T. RICHARDSON, NEW BERN
RIETY: Leap's Prolific.
RTILIZED: 150 pounds cottonseed meal and 150 pounds acid phosphate. Top-dressed with 60 pounds nitrate of soda.
IMATED YIELD: 31½ pounds per acre.

hen the present price of flour, and the probability that it cannot be
based at any price, as the war advances, are considered, all farmers
ld appreciate the importance of making preparations for producing
fficient amount of wheat to supply the entire amount needed for
e consumption.

There are several advantages in producing the home supply. Ho grown wheat means a better utilization and distribution of the labo the farm, an opportunity for improving the crop rotation, and the a tion of such valuable by-products as wheat bran, or straw. These vantages exist at all times, and at present there is the added inducer of producing our own supplies, especially during the war.

It should be stated that the extensive growing of wheat in Eas North Carolina is not advocated, but on the other hand it is beli that every farmer can well afford to make intensive preparations for ducing his home needs. The crop can, and is, being grown successf throughout all Eastern Carolina. Yields of twenty-five and th bushels per acre are not unusual, while the average for the sectio sufficient to encourage liberal sowing for home consumption. The has been when this section produced its home supply of wheat, and t is no reason why it cannot be done again, profitably. Farmers throug the Coastal Plain counties are making plans and preparations to more wheat this fall. It is therefore considered timely to reprint circular setting forth the best known methods for handling the w crop under Coastal conditions.

SOIL

Wheat needs a clay or clay loam soil in a good state of fertility the most profitable production. Whatever the type of soil, it shoul of fine texture and compact in its nature. Each farmer should selec seeding to wheat a few acres of clay loam, loam, or fine sandy loam taining a liberal amount of vegetable matter. Avoid poor soils, co sandy soils or black soils which contain so much vegetable matter a make the soil too open and porous for the crop. If a proper selec of the place for sowing is made, a good start has been made. *Do expect good yields on poor soil.*

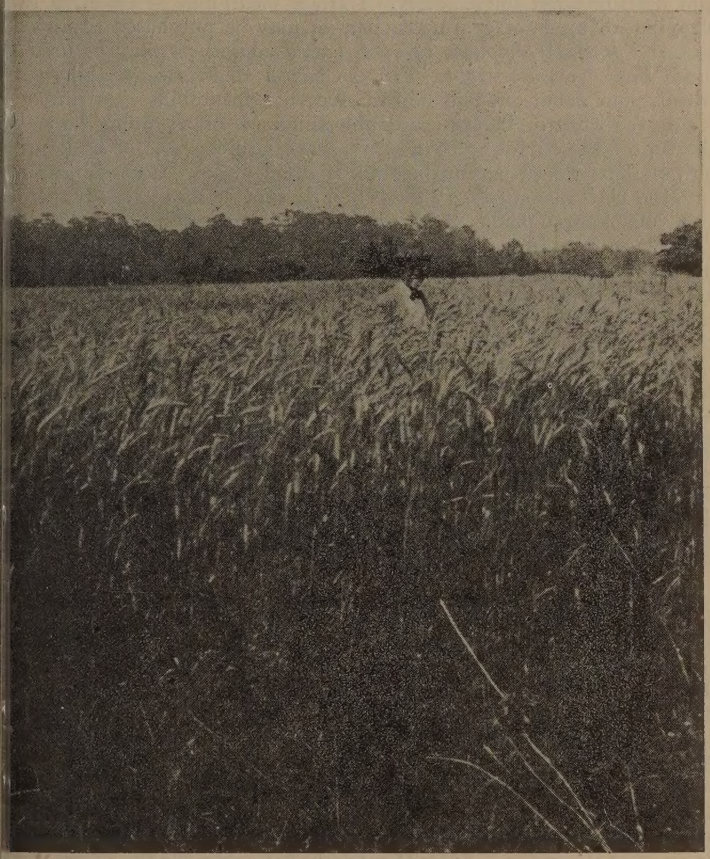
PREPARATION OF THE SOIL

Where wheat is to follow a forage crop such as cowpeas or soy be and there is considerable vegetation on the land, it is extremely im tant for the soil to be prepared by thorough discing and plowing sev weeks before seeding time. This gives the vegetation time to begin d and the soil time to settle and become compact. During this time weeds and grass should be kept down and the moisture conserved frequent harrowing. Ample time should be taken to prepare the well, even though seeding should have to be delayed some. In case wheat is to follow a summer tilled, clean cultured crop, such as c cotton, or tobacco, it is better not to plow the land. Instead, prepa well to a depth of three inches with a disc harrow or other sha running implement. The whole surface should be thoroughly fine that depth.

SEED AND VARIETIES

Home-grown seed, as in most other crops, are as well, or be adapted to home-sowing as seed bought from elsewhere, provided s are taken to keep the seed free from insects, and further, that the

well graded and treated to prevent smut. Farmers having a supply ıome-grown wheat of some such recognized varieties as Purple Straw, tz, Leap's Prolific, Red May and Fulcaster (the latter is a bearded



ig. 3 Courtesy Zeno Moore, County Agent, Edgecombe County

Six-acre Field of Wheat on Farm of Miss Lucy Staton, Tarboro

ARIETY: Stoner.
IELD: 200 bushels.

iety) would do well to purchase a grading machine, and after proper ding put their surplus wheat on the market to be sold for planting in rby localities. Groups of farmers can well afford to purchase a der coöperatively. If a local supply of seed of the above varieties not be obtained, coöperate with neighbors to secure seed from some eat section.

KEEPING SEED FREE FROM WEEVILS

Farmers having their seed wheat on hand or purchasing it any leng of time in advance of seeding time should keep a close watch for weev and destroy them immediately. Carbon bisulphide is effective in d stroying all kinds of grain weevils. It may be purchased at any dr store. *For small amounts of seed, barrel containers may be used pr vided they are water-tight.* Fill the barrel about seven-eighths full wheat, pour about one-half cupful of carbon bisulphide in a saucer a set on the wheat. Then tie a double thickness of wrapping paper ov the top of the barrel or cover with several thicknesses of sacks or o quilts. The liquid carbon bisulphide, immediately after being pour into the saucer, changes to a gas which is heavier than air. It therefo sinks down through the grain and destroys the weevil.

After several days, examine the wheat to see if the weevils were co pletely destroyed. If not, repeat the treatment, using a little larg amount of the carbon bisulphide. Wheat in larger bulk, as when stor in bins, can be treated in the bin by using 15 to 20 pounds of the ins tide per 1000 cubic feet of grain. The liquid may be placed in vessels sprinkled uniformly over the surface of the grain. Always cover t surface of the grain in order to confine the gas fumes. The work always more effective when done when the weather is warm and t grain is thoroughly dry. If the grain is dry, there is no danger injuring the germination by this treatment. Never carry fire arou where this chemical is being used, as its fumes are inflammable. Nev use it where the live stock will breathe it. It is very poisonous.*

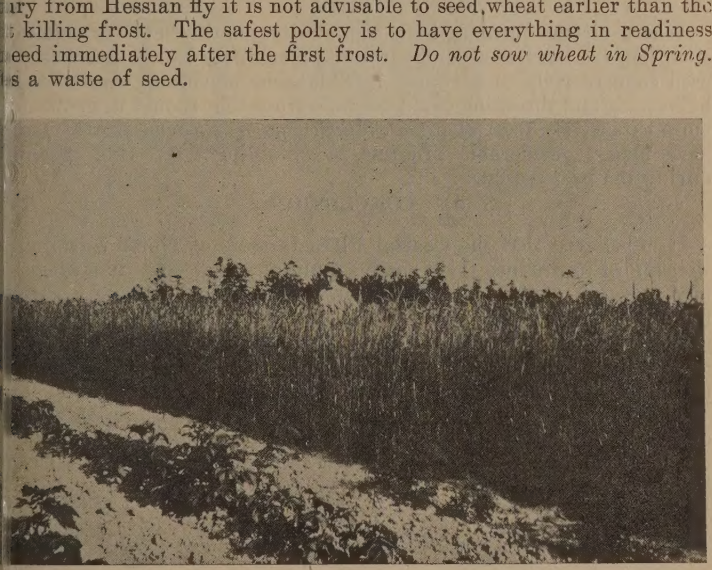
TREATING SEED FOR SMUT

Wheat containing smut not only yields much less, but is not desirab for human consumption. In order to be sure of having it free from sm the seed should be treated with Formalin of standard strength befo planting. A good plan is to treat the seed one day and plant the ne This is not necessary, however, as the seed will keep all right if prope dried. Spread the seed wheat on a tight floor and sprinkle with a sol tion of Formalin made by adding one ounce (about two tablespoons) Formalin to three gallons of water. It takes about one gallon of th solution to each bushel of wheat. It should be sprinkled on the whe and the wheat stirred until every grain is thoroughly wet. Then cov the grain with bags or sheets that have been saturated with a strong solution of Formalin. After about eight hours remove the covers, spre the wheat out in a thin layer and dry rapidly. If allowed to remain w longer than this the grains will swell, and in that case, allowance w have to be made in order to get sufficient seed to the land. Do not bu seed until thoroughly dry or loss will occur from heating and mouldi A druggist can secure Formalin easily if he does not already have it stock. One pint is sufficient to treat fifty bushels of seed. This tre ment is also effective in controlling oat smut.

*If more detailed information concerning the use of this valuable insectide is desi write the U. S. Department of Agriculture, Washington, D. C., for Farmers' Bulle No. 799.

TIME OF SEEDING

'he customary time of seeding wheat is very different in different
lities, but it has been clearly demonstrated that late sown wheat
s not yield nearly so well as early sown wheat. On account of the
ıry from Hessian fly it is not advisable to seed wheat earlier than the
killing frost. The safest policy is to have everything in readiness
eed immediately after the first frost. *Do not sow wheat in Spring.*
s a waste of seed.



ig. 4. Courtesy V. G. Martin, former County Agent, Wayne County

)EMONSTRATION FIELD OF WHEAT ON FARM OF N. A. HOWELL, NEAR GOLDSBORO
IELD: 30 bushels per acre.

AMOUNT OF SEED

)ome growers use one bushel of seed per acre. Others use six pecks.
s believed that this latter amount of the varieties recommended in
circular will be a good seeding per acre for Eastern Carolina
ditions. If a grain drill is obtainable better results will be had from
than from broadcasting.

FERTILIZATION

t is a mistake to expect wheat to yield well without liberal fertiliza-
ı. Wheat needs some potash in its fertilizer, but where this cannot
)btained a mixture containing about seven or eight per cent available
)sphoric Acid and three per cent Ammonia makes a pretty good wheat
ilizer on land of average fertility. It should be applied at seeding
e at the rate of 300 to 400 pounds per acre.
ater, if need be, an application of seventy-five to one hundred pounds
Nitrate of Soda, or Sulphate of Ammonia as a top dresser should be
)lied just as the plants are beginning to send up shoots in the spring

for the formation of seed heads. Where a good crop of legumes h been plowed in, or where manure has been added in fairly good amoun the amount of nitrogen to be added may be materially reduced or entire left out.

HARVESTING AND THRESHING

Where all the farmers in a community plant wheat for home co sumption the harvesting and threshing machinery can be purchased a used coöperatively to advantage. This same machinery can be used harvesting and threshing oats and rye—crops that should be grown mu more extensively than at present. Farmers in Eastern North Caroli have made considerable progress in obtaining harvesting machine during the past season.

CONCLUSION

It is believed that the Coastal Plain farmers of North Carolina c well afford to produce their home supply of wheat, and that when bu ness men are assured that this will be done, there will be a sufficie number of roller mills established in this section to give farmers a go grade of flour from their own products. This is evidenced by the fa that a number of roller mills have been established in coastal territo in the past few months.

Those farmers who wish to sow wheat this fall and want informati or assistance that is not given in this circular, should get in touch wi the local County Agent of the North Carolina Agricultural Extensi Service.